AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method applicable within a mobile communication system for adaptively allocating a downlink data rate to an access terminal to compensate for channel fading, said method comprising:

selecting a downlink data rate in accordance with a determined signal-to-noise level, wherein said downlink data rate is associated with a specified signal-to-noise threshold value to achieve a specified packet error ~~rate;~~ rate, wherein selecting the downlink data rate comprises:

comparing said determined signal-to-noise level with a plurality of signal-to-noise threshold values, wherein each of said plurality of signal-to-noise threshold values is associated with a downlink data rate; and

selecting a highest downlink data rate corresponding to two or more of said plurality of signal-to-noise threshold values that do not exceed said determined signal-to-noise level, wherein said mobile communication system includes selectable data rate control sets in which each of said plurality of signal-to-noise threshold values is associated with a corresponding downlink data rate for said specified packet error rate, and wherein selecting the highest downlink rate comprises:

comparing the relative values of said two or more signal-to-noise threshold values; and

selecting a data rate control set corresponding to the lowest among said two or more signal-to-noise threshold values.

~~transmitting~~ receiving a packet ~~to an~~ by the access terminal at said selected downlink data rate;

responsive to successfully decoding said packet, decreasing the signal-to-noise threshold value specified for said selected downlink data rate; and

responsive to unsuccessfully decoding said packet, increasing the signal-to-noise threshold value specified for said selected downlink data rate, said increasing the signal-to noise threshold value specified for said selected downlink data rate comprising:

computing an increased signal-to-noise threshold value specified for said selected downlink data rate in accordance with the relation:

$$T = T_j + \Delta_{local}$$

wherein T represents the increased signal-to-noise threshold value associated with the selected downlink data rate, T_j represents the current signal-to-noise threshold value associated with the selected downlink data rate, and Δ_{local} represents a local data rate control delta value.

2. (Original) The method of claim 1, wherein said determined signal-to-noise level at said access terminal is a ratio of the signal strength of an allocated access terminal channel to the combined external signal strength.

3. (Original) The method of claim 1, wherein said selecting a downlink data rate is preceded by determining a signal-to-noise level at said access terminal.

4. - 7. (Cancelled)

8. (Currently Amended) The method of claim 1, ~~wherein said mobile communication system includes selectable data rate control sets in which each of said plurality of signal-to-noise threshold values is associated with a corresponding downlink data rate for said specified packet error rate, said method~~ further comprising:

responsive to unsuccessfully decoding said packet, increasing each of said plurality of signal-to-noise threshold values in accordance with the relation:

$$T = T_i + \Delta_{global}$$

wherein T represents the increased value for the i^{th} signal-to-noise threshold value among said plurality of signal-to-noise threshold values, T_i represents current value for the i^{th} signal-to-noise threshold value among said plurality of signal-to-noise threshold values, ~~*PER represents said specified packet error rate,*~~ and Δ_{global} represents a global data rate control delta value.

9. (Currently Amended) A method applicable within a mobile communication system for adaptively allocating a downlink data rate to ~~an~~ a mobile access terminal to compensate for channel fading, said method comprising:

selecting, by the mobile access terminal, a downlink data rate in accordance with a determined signal-to-noise level, wherein said downlink data rate is associated with a specified signal-to-noise threshold value to achieve a specified packet error rate;

~~transmitting~~ receiving a packet by the mobile ~~to an~~ access terminal at said selected downlink data rate; and

responsive to successfully decoding said packet, the mobile access terminal decreasing the signal-to-noise threshold value specified for said selected downlink data rate, said decreasing the signal-to-noise threshold value specified for said selected downlink data rate comprising:

computing a decreased signal-to-noise threshold value specified for said selected downlink data rate in accordance with the relation:

$$T = T_j - (PER * \Delta_{local})$$

wherein T represents the decreased signal-to-noise threshold value associated with the selected downlink data rate, T_j represents the current signal-to-noise threshold value associated with the selected downlink data rate, *PER* represents said specified packet error rate, and Δ_{local} represents a local data rate control delta value.

10. (Original) The method of claim 9, wherein said mobile communication system includes selectable data rate control sets in which each of said plurality of signal-to-noise threshold values is associated with a corresponding downlink data rate for said specified packet error rate, said method further comprising:

responsive to successfully decoding said packet, decreasing each of said plurality of signal-to-noise threshold values in accordance with the relation:

$$T = T_i - (PER * \Delta_{global})$$

wherein T represents the decreased signal-to-noise threshold, T_i represents the i^{th} signal-to-noise threshold value among said plurality of signal-to-noise threshold values, *PER*

represents said specified packet error rate, and Δ_{global} represents a global data rate control delta value.

11. (Currently Amended) A mobile communication system for adaptively allocating a downlink data rate to an access terminal to compensate for channel fading, said mobile communication system comprising:

processing means for selecting a downlink data rate in accordance with a determined signal-to-noise level, wherein said downlink data rate is associated with a specified signal-to-noise threshold value to achieve a specified packet error ~~rate;~~ rate, wherein said processing means for selecting a downlink data rate comprises:

processing means for comparing said determined signal-to-noise level with a plurality of signal-to-noise threshold values, wherein each of said plurality of signal-to-noise threshold values is associated with a downlink data rate; and

processing means for selecting a highest downlink data rate corresponding to two or more of said plurality of signal-to-noise threshold values that do not exceed said determined signal-to-noise level;

memory containing selectable data rate control sets in which each of said plurality of signal-to-noise threshold values is associated with a corresponding downlink data rate for said specified packet error rate;

wherein said processing means for selecting the highest downlink data rate comprises:

processing means for comparing the relative values of said two or more signal-to-noise threshold values; and

processing means for selecting a data rate control set corresponding to the lowest among said two or more signal-to-noise threshold values;

air-interface transmission means for transmitting a packet to an access terminal at said selected downlink data rate;

processing means responsive to successfully decoding said packet for decreasing the signal-to-noise threshold specified for said selected downlink data rate; and

processing means responsive to unsuccessfully decoding said packet for increasing the signal-to-noise threshold specified for said selected downlink data rate, said processing means for increasing the signal-to-noise threshold specified for said selected downlink data rate comprising:

processing means for computing an increased signal-to-noise threshold specified for said selected downlink data rate in accordance with the relation:

$$T = T_j - \Delta_{local}$$

wherein T represents the increased signal-to-noise threshold associated with the selected downlink data rate, T_j represents the current signal-to-noise threshold value associated with the selected downlink data rate, and Δ_{local} represents a local data rate control delta value.

12. (Original) The mobile communication system of claim 11, wherein said determined signal-to-noise level at said access terminal is a ratio of the signal strength of a pilot channel to the combined external signal strength.

13. (Original) The mobile communication system of claim 11, further comprising signal detection and processing means for determining a signal-to-noise level at each access terminal.

14-17. (Cancelled)

18. (Currently Amended) The mobile communication system of claim 11, ~~further comprising memory containing selectable data rate control sets in which each of said plurality of signal-to-noise threshold values is associated with a corresponding downlink data rate for said specified packet error rate, said mobile communication system~~ further comprising:

processing means responsive to unsuccessfully decoding said packet for increasing each of said plurality of signal-to-noise threshold values in accordance with the relation:

$$T = T_i + \Delta_{global}$$

wherein T represents the increased value for the i^{th} signal-to-noise threshold value among said plurality of signal-to-noise threshold values, T_i represents current value for the i^{th} signal-to-noise threshold value among said plurality of signal-to-noise threshold values, ~~*PER* represents said specified packet error rate,~~ and Δ_{global} represents a global data rate control delta value.

19. (Currently Amended) A mobile ~~communication system for adaptively allocating a downlink data rate to an~~ access terminal ~~to compensate for channel fading, said mobile communication system~~ comprising:

~~processing means for selecting~~ a processor to select a downlink data rate in accordance with a determined signal-to-noise level, wherein said downlink data rate is associated with a specified signal-to-noise threshold value to achieve a specified packet error rate;

the processor to send a data rate request containing the selected downlink data rate to an access node over an uplink channel;

air-interface transceiver to receive ~~transmission means for transmitting~~ a packet from the access node ~~to an access terminal~~ at said selected downlink data rate; and

the processor ~~processing means~~ responsive to successfully decoding said packet ~~for decreasing~~ to decrease the signal-to-noise threshold value specified for said selected downlink data rate, ~~said processing means for decreasing~~ wherein the signal-to-noise threshold value specified for said selected downlink data rate ~~comprising~~ is decreased by:

~~processing means for~~ computing a decreased signal-to-noise threshold value specified for said selected downlink data rate in accordance with the relation:

$$T = T_j - (PER * \Delta_{local})$$

wherein T represents the decreased signal-to-noise threshold value associated with the selected downlink data rate, T_j represents the current signal-to-noise threshold value associated with the selected downlink data rate, *PER* represents said specified packet error rate, and Δ_{local} represents a local data rate control delta value.

20. (Currently Amended) The mobile access terminal ~~communication system~~ of claim 19, further comprising memory for storing selectable data rate control sets in which each of said plurality of signal-to-noise threshold values is associated with a corresponding downlink data rate for said specified packet error rate, ~~said mobile communication system further comprising:~~

~~processing means~~ the processor responsive to successfully decoding said packet ~~for decreasing~~ to decrease each of said plurality of signal-to-noise threshold values in accordance with the relation:

$$T = T_j - (PER^* \Delta_{local})$$

wherein T represents the decreased signal-to-noise threshold, T_i represents the i^{th} signal-to-noise threshold value among said plurality of signal-to-noise threshold values, *PER* represents said specified packet error rate, and Δ_{global} represents a global data rate control delta value.

21. (New) The method of claim 9, further comprising responsive to unsuccessfully decoding the packet, increasing the signal-to-noise threshold value specified for the selected downlink data rate.

22. (New) The mobile access terminal of claim 19, the processor responsive to unsuccessfully decoding the packet to increase the signal-to-noise threshold value specified for the selected downlink data rate.